
**Information and documentation —
Processes and functional
requirements for software for
managing records —**

**Part 1:
Functional requirements and
associated guidance for any
applications that manage digital
records**

*Information et documentation — Processus et exigences
fonctionnelles applicables aux logiciels de gestion des documents
d'activité —*

*Partie 1: Exigences fonctionnelles et recommandations associées pour
toute application de gestion de documents d'activité numériques*



This document is a preview generated by EKO



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Key outcome areas and configuration options	2
4.1 Key outcome areas	2
4.2 Key outcome areas in detail	2
4.2.1 Records capture and classification	2
4.2.2 Records retention and disposition	3
4.2.3 Records integrity and maintenance	3
4.2.4 Records discovery, use and sharing	3
4.3 Possible configuration options for managing records created in business applications	3
5 High-level requirements for software managing digital records	4
5.1 General	4
5.2 Assumptions	5
5.3 General overview of requirements	5
6 Model functional requirements for applications that manage digital records	6
6.1 Requirements groupings	6
6.2 Obligation levels and extensibility of requirements	7
6.3 Requirements in detail	7
7 Understanding the model functional requirements	12
7.1 General	12
7.2 Addressing records requirements in business applications	13
7.2.1 General	13
7.2.2 Importance of records metadata	14
7.2.3 Archiving	14
7.3 Records characteristics that should be enabled by business applications	14
7.3.1 General	14
7.3.2 Authenticity	15
7.3.3 Reliability	15
7.3.4 Integrity	15
7.3.5 Usability	15
7.4 Characteristics of business applications that manage records	15
7.4.1 General	15
7.4.2 Secure	15
7.4.3 Compliant	15
7.4.4 Comprehensive	15
7.4.5 Systematic	15
7.5 Records entities and relationships	16
7.5.1 Entity relationship models	16
7.5.2 Business classification scheme	16
7.5.3 Aggregations of digital records	17
7.5.4 Digital records	17
7.5.5 Extracts	17
7.5.6 Components	18
8 Using the model functional requirements	18
8.1 General	18
8.2 Determining needs for evidence of events, transactions and decisions in business applications (identifying the needs for records)	18
8.2.1 General	18

8.2.2	Step 1: Identifying requirements for evidence of the business using functional analysis.....	19
8.2.3	Step 2: Analysing the work process.....	20
8.2.4	Step 3: Identify the information that records the required evidence	20
8.2.5	Step 4: Identify linkages and dependencies.....	23
8.2.6	Step 5: Reflect requirements for evidence of business in functional requirements for software and determine implementation options	24
8.3	Functional requirements conformity assessment.....	24
8.3.1	General.....	24
8.3.2	Undertaking the conformity assessment process.....	24
8.4	Risk assessment.....	25
8.5	Determining functional requirements for managing records in an application design specification	26
8.5.1	General.....	26
8.5.2	Step 1 — Assess the functional requirements.....	26
8.5.3	Step 2 — Check appropriateness of the requirements.....	27
8.5.4	Step 3 — Check appropriateness of the obligation levels.....	27
8.5.5	Step 4 — Identify gaps in the functional requirements.....	27
8.6	Assessing options for deploying functionality in one or more software applications.....	27
Annex A (informative) Example template for functional requirements.....		32
Annex B (informative) Mapping of records principles to model functional requirements.....		36
Bibliography		37

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 46, *Information and documentation* Subcommittee SC 11, *Archives/records management*.

This second edition cancels and replaces the first edition (ISO 16175-1:2010), which has been technically revised. The main changes compared to the previous edition are as follows.

- The distinction between dedicated records management applications and business applications has been dispensed with. As a result, a single set of functional requirements and associated guidance is provided in a single document that addresses both kinds of software applications.
- The number of functional requirements has been greatly reduced and simplified in order to help users focus on the most important areas of software functionality.
- Text has been updated, clarified and simplified, with the use of records jargon eliminated where possible and explained when necessary in acknowledgement of the primary audience for the standard being IT professionals. More diagrams have been added.

A list of all parts in the ISO 16175 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 Case for management of records

Good management of records and information is fundamental to a well-functioning organization. It supports business functions and processes and provides a basis for efficient service delivery. It also provides the mechanism for organizations to retain evidence of their decisions and actions for future reference and to support business continuity. Good records practice is simply good business practice.

Managing records facilitates:

- a) efficiency, by making information readily available when needed for decision-making and operational purposes and to support information reuse and innovation;
- b) sound use of financial resources, by allowing timely disposition of non-current records;
- c) accountability, by enabling the creation of complete and authoritative records of business functions and processes;
- d) compliance, by demonstrating that legal requirements have been met; and
- e) risk mitigation, by managing the risks associated with unlawful loss or destruction of records and with over-retention of records, and risks resulting from inappropriate or unauthorized access to records.

In most organizations today, business is transacted and enabled by a variety of software applications. If organizations are to capture and manage reliable records of their business functions and processes, it is vital that their line-of-business applications incorporate good records functionality as part of their design. Making, keeping and disposing of records should be an organic and natural part of business processes.

0.2 Purpose of this document

This document provides model, high-level functional requirements, with associated explanatory information and usage guidance, for any software applications that are intended to manage digital records. ISO/TS 16175-2:—¹⁾ provides guidance on how to select/design, implement and maintain software for managing records within organizations.

For the purpose of presenting model functional requirements, this document makes no distinction between software applications that are used for any business purpose and those applications specifically intended and designed to manage records. Examples of the former include Enterprise Content Management Systems and applications which create records as one part of their functionality such as Contracts Management Systems, Case Management Systems or transactional systems. The term used throughout is therefore “Business application”, which is intended to encapsulate the totality of applications that manage records as part of their usual functioning. It is assumed that almost all business applications will generate data that is needed to serve as evidence of business functions and processes for future reference and as such will, among other things, need to create, store and manage records. The purpose of this document is to assist the developers and implementers of those applications to identify and deploy functional requirements that helps ensure that the data generated and held in such applications can serve as adequate records of business functions and processes.

In addition to providing model high-level functional records requirements in business applications, this document provides guidance on identifying and addressing the needs for records. It aims to:

- a) help organizations understand requirements for managing digital records as they relate to software applications used by organizations;
- b) assist IT and business specialists to include records considerations in applications design and/or procurement; and

1) Under development. Stage at the time of publication: ISO/DTS 16175-2:2020.

- c) assess the capabilities of existing business applications to manage records, including helping to identify gaps or areas of risk in the current functionality of those applications.

This document is part of a suite of records system implementation guidance that supports the core international records management standard, ISO 15489-1, where utility and characteristics of records systems are explained.

0.3 Audience

The primary audience for this document are professionals responsible for designing, developing, procuring, reviewing and/or implementing software applications, such as business analysts, applications developers, solution architects and IT procurement decision-makers. The audience also includes records professionals who are involved in advising or assisting in such processes.

Role	Purpose
Solution architects/designers	Ensure IT applications infrastructure supports the records requirements.
Records professionals	Advising and assisting the business in defining records requirements.
IT procurement decision-makers	Ensure procurement processes meet these requirements.
Applications developers	Build applications and support information systems testers during functional specification development and test phase. Includes software vendors and developers who wish to incorporate records functionality within their products, both commercial or open source.
Business analysts	Develop technical specifications; initiate/collate feedback and walkthrough. Submit specification for sign-off and pass over to developer. Update any changes to specification after sign-off (e.g. changes that are agreed during test phase), if required.
Applications testers	Develop test plans, test conditions/cases and execute tests. Analyse test results, log any failures and retest once immutability has been applied and built to test environment.
Business owners	For solution-specific requirements. Review and confirm application requirements that meet business objectives. Provide the business rules/processes/requirements to the business analyst during the software specification development and test phases.

Given the target audience for this document, the use of terminology that is specific to records professionals has been minimised as far as possible. Where the use of such terminology is unavoidable, it is explained and/or defined (in [Clause 3](#)).

Information and documentation — Processes and functional requirements for software for managing records —

Part 1: Functional requirements and associated guidance for any applications that manage digital records

1 Scope

This document provides model, high-level functional requirements and associated guidance for software applications that are intended to manage digital records (including digital copies of analogue source records), either as the main purpose of the application or as a part of an application that is primarily intended to enable other business functions and processes.

It does not include:

- functional requirements for applications that manage analogue records;
- generic design requirements such as reporting, application administration and performance;
- requirements for the long-term preservation of digital records in a dedicated preservation environment;

NOTE The model requirements are intended to encourage the deployment of applications that do not hinder long-term preservation of records. As such, some of the requirements support long-term digital preservation outcomes.

- implementation guidance for applications that manages analogue and/or digital records. Such guidance can be found in ISO/TS 16175-2:—²⁾.

2 Normative references

The following document is referred to in the text in such a way that some or all of its content constitutes requirements of this document. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 30300, *Information and documentation — Records management — Core concepts and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 30300 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org>

2) Under development. Stage at the time of publication: ISO/DTS 16175-2:2020.